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TO THE PUBLIC GENERALLY;

AND TO THOSE WHO ARE OR WISH TO BE

Engaged in the Lucrative Business

OF

**BEE CULTURE,**

I SUBMIT, FOR THEIR PERUSAL,

This Little Volume.

*D. S. Gray.*

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## INTRODUCTION.

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After many years of experimental trial with the honey bee in many of the different kinds of Patent Hives, and reading many of the reliable authors, who have written on this subject, I am satisfied that I understand the several minutiae, necessary to a more successful system of bee culture than is practiced by most bee raisers at the present time. It is not my object in this work, to give a lengthy treatise on the natural habits of the honey bee, or discuss at great length many of the conflicting theories pertaining to the so-called mysteries of the bee, but to merely touch upon a few facts that have been or should be familiar with every person who is the owner of a few good swarms, and offer such suggestions that will, if practiced, enable those who will carry them out, to reap a much greater harvest of honey than usual. If I succeed in throwing light upon this already well illuminated subject, it is all I aspire to. I am not in favor of new or mysterious theories, but have always conducted my experiments on, and have been guided by, common sense principles.

With this much of an introduction I propose to proceed to the narration of a few facts in relation to bee culture.

D. S. GRAY.

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## GRAY'S BEE HIVE.

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That the culture of the honey bee, has during ages past been wrapped in some great mystery, is patent to any one who has read any of the many books, treating on this subject. Nearly every inventor of a patent bee hive, publishes either by himself or through some friend, a book; setting forth at length some great mystery that he has discovered in the economy of bee culture. Very many of the patent hives possess a certain degree of merit, when the design of the inventor is fully carried out; but alas! to the great mortification of the owner, the hive fails to fulfill the great end for which it was designed.

These failures too often occur through the negligence or inability of the owner to take proper care of the hive, by way of cleaning it out, &c., &c. Many persons are incapable of succeeding with most of the different kinds of hives now in use, from the fact that they cannot handle, or work around bees, without getting stung. The greatest mystery I know about bee keeping is, that some persons can handle bees with perfect impunity, while others are obliged to beat a hasty retreat whenever they come near their hives. The only other "mystery" is, to keep your bees clean, and free from moths, and your stocks strong.

A bee hive that cannot be cleaned out, and in fact that does not afford to the operator perfect security from the sting of the bees, cannot become a great favorite with the public generally. A bee hive should be so constructed as to afford the operator full control of all its parts, at all seasons of the year, without any danger of getting stung. The ventilation should be complete both from above and below. The bee compartments should be only large enough to hold a sufficient supply of stores for the colony to subsist upon during the winter months, thereby giving us a larger yield of honey in the surplus honey boxes. These boxes should be so constructed that a portion of the honey can be removed without injury to the remaining combs, or to the box itself, that we may take therefrom honey for the table as necessity requires; and at the same time have it in the best possible condition so far as appearance goes. I repeat: a good hive should give the operator perfect control over his bees, in all parts of the hive, and at all seasons of the year.

I am the inventor of a new bee hive that will sustain the following assertions:

1st. It is the best moth proof hive now in use.

2d. It is a perfect non-swarmers when arranged for that purpose.

3d. Its ventilation is complete, and under the perfect control of the operator at all times.

4th. It affords perfect security to the operator, from the sting of the bee, in any handling required, such as cleaning out the hive, taking away the surplus honey, removing the swarms in swarming time, &c.

5th. It does not, in any way, interfere with the natural habits of the bee.

6th. It allows you to remove any of the combs in the bee chamber or surplus honey boxes at any time without the least injury to any of the remaining parts.

7th. The Cabinet Hive is double in its structure throughout, therefore insuring a more even temperature to the inner boxes, by affording ample protection from the sudden changes of temperature.

8th. The bees will swarm on a cold or stormy day in my hive as readily as they will in fair weather, the swarming operation taking place inside of the hive, thereby securing a more regular increase of swarms than can possibly be obtained in the usual manner. So completely is the swarming operation under our control that we can prevent swarming altogether if we desire.

9th. The inside of the hive being removable in all its parts, allows the operator to take away the new swarms at his leisure, effectually doing away with the labor of watching the bees in swarming season. By the use of a graduated slide that controls the bee entrance we prevent the queen bee from leaving the hive, but the worker bees can pass out and in as usual. By this arrangement we prevent our new swarms from "running away."

10th. From the peculiar construction of the hive by affording protection to the bees from excessive heat and cold, by its ample ventilation and its natural adaptation to the requirements of the bees, they will gather much more honey than in any single, or out-door hive.

11th. It is not possible for mice or other vermin to injure the bees, or the snow to blockade them; causing destruction by suffocation, or dampness to accumulate within the hive; causing the combs to become mouldy, or (in severe cold weather) frosty, thereby causing starvation when there is an abundance of supplies within the hive. More bees perish in winter from this than any other cause.

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In form my hive resembles a small bureau, complete in all its parts. The Cabinet, or Bureau Hive, is intended to be used as a parlor, sitting-room, or chamber hive, and is, when well made for that purpose, really an ornamental piece of furniture, suitable as such for any room in the house. It is the most perfect Bee Hive in all its arrangements that has ever been presented to the public. Where the directions, which accompany each hive, are fully carried out every hive is warranted to fulfill all that is claimed for it.

The advantage arising from having our bees in some room in the

house are very many, a few only of which will be mentioned in this brief circular.

When we consider that before the bees can build a cell for any purpose whatever, they must have at least eighty degrees of heat within their hive, and that if the heat exceeds one hundred degrees the combs are liable to fall from their own weight, we can readily understand why it is so necessary that they should be so well protected from the extreme degrees of heat and cold. We have our houses built according to the most approved method, for securing to us the greatest amount of comfort at the least expense. If our house is cold we warm it with fire. If too warm we cool it by ventilation and shade as much as possible. Our houses are cooler or warmer as our comfort demands.

The honey bee requires a more even temperature than a human being. Nature has provided the bee with the means of creating, to a certain extent, within themselves, the required ventilation or warmth, as the case may be, in almost any place which they by themselves select for a home. In extreme warm weather, if we examine a swarm of bees in a glass hive we will observe columns of bees on one side of the entrance, with their heads all in one direction, while on the other side they have their heads in an opposite direction, all making their wings move as rapidly as possible, causing a current of air to pass through the hive, thus preventing the heat from becoming too great, and the consequent destruction of their home by the melting down of their combs. The number thus employed will vary according to the greater or less degree of heat within their hive. In cool weather, if in the honey season the interior of the hive be too cold, the bees will generate a greater degree of heat by clustering in sufficient numbers in that portion of the hive where their labors are being carried on, that they may be able to construct their combs, deposite stores or protect the young brood, &c., &c.

Now these things are so, are facts, and I defy any one to successfully contradict them, we can readily understand why a swarm of bees in a hive properly constructed with a view to warmth and ventilation, and well cared for, will gather much more honey in a season than in a common box hive.

Observe the bee in her more natural and unconfined state, when left to select for herself a home. Does she ever enter a dead hollow tree having a very thin shell? Or some empty box that chances to be in the vicinity? No. In what kind of a tree do we usually find bees, and why do we frequently obtain much larger supplies of honey in a bee tree than in a common box hive? Let us examine the tree that has afforded such an abundance of honey. It is a live tree, with an abundance of sap flowing through the outside shell. This shell is from two to four inches thick; the cavity occupied by the bees is surrounded by this live shell which is a great non-conductor of heat, thereby affording to the bees great protection from the excessive heat of midsummer or the cold of winter.

But, says one: "I would rather have a bee gum made from a hollow log than any hive I ever used. It is far preferable to any box hive." Why? Because the log is much thicker than the boards commonly used for hives, besides it is round, and does not present so direct a surface to the rays of the sun nor to the cold blasts of winter, and of course thus secures to the interior of the hive at all seasons a much more uniform temperature. The thicker the material used for hives the better. Make a common box hive of two inch plank, and one of boards one inch thick; give each an equal chance and see if the foregoing assertions are not facts. If such facts do exist, what better place could we select for our bees than a dwelling house? Always cool in summer and warm in winter, the bees have nothing to do but gather honey and stores; the thousands that would otherwise be employed in ventilating or warming their hives can be liberated, to work for our luxury and pecuniary benefit.

In view of these facts I am free to assert that my Cabinet Hive will prove itself far superior to any other ever invented. Even as an out-door hive it cannot be excelled. In consequence of its ample ventilation and double structure it affords complete protection against both extremes of heat and cold without the assistance of the bees. The hive being double throughout the bees in the inside compartment are free from many of the inconveniences which they are necessarily subjected to in a single hive, and in the winter season, the temperature of the inner box being more uniform the bees require much less food than they otherwise would, and the number of bees lost from death by various causes is far less. Bees come out in such a hive in the spring in a strong, healthy and vigorous condition.

During the winter months bees should not be allowed to leave their hive; they should have ample ventilation from the top, that any dampness whatever that may accumulate in the hive may pass off. If not allowed to escape a vapor will gather upon the combs and cause them to become mouldy, and in extreme cold weather thickly coated with frost, and in many instances, ice. If the cold weather continue for several days, or until the bees have consumed all their food in the immediate portion of their hive where they have huddled together to keep themselves more comfortable, they must die from starvation. If they remove to another portion of their combs for supplies they find them covered with a coating of frost or ice, as the case may be, which the bees in their benumbed state are incapable of penetrating, thus rendering it impossible for them to appropriate any of the abundant supplies within their hive. Thus we often hear persons say: "my bees suffocated," or "froze to death," or something more ridiculous, when in fact, they died from starvation with an abundance of honey in their hive.

During the brooding season in the early summer months, they should have ventilation only from below. If upward ventilation be allowed at this season of the year it will cause a current of air to



pass upward among the brood combs, thereby causing injury by delay, and in many instances destroying the young brood altogether. This is the reason why bees will always if possible, in the early part of the season, close up any open spaces we have covered with wire cloth or something else. They very much dislike a current of air directly upon them at any season of the year.

The only proper way to ventilate a hive is to have it double and ventilate from the inner compartment in such a manner as to prevent a direct ray of light or a current of air to the bees. Ventilation in a single hive is folly in the extreme.

In the construction of my Hive I have aimed so far as possible to adapt it to the natural habits of the honey bee; one great object being to afford the greatest facilities, and most economical hive in point of time and labor to the bee; a hive in which they could produce the greatest amount of income with a given outlay of labor and time, as well as to allow the operator the greatest facilities for keeping his bees in the best possible condition with the least trouble and risk of getting stung, thereby receiving the largest income from the capital invested.

Town, County and State Rights for sale on very liberal terms.

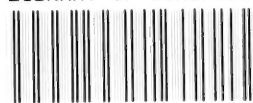
Agents wanted, to whom liberal inducements will be given.

Any communications addressed to

D. S. GRAY & MESSER,

ONARGA, IROQUOIS CO., ILLINOIS,

Will be promptly answered.



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## Recommendations:

ONARGA, ILL., July 10, 1865.

This is to certify that I have examined several of Gray's Bee Hives and find the bees working as well in every respect as the most particular could desire. The combs in the slate hive are in the projections every time. I consider the Graduated Slide for controlling the bee entrance to prevent new swarms from running away the crowning point in bee hives. It is by far the best hive for practical use I ever saw. Every necessary operation, such as cleaning out, taking away surplus honey, removing new swarms, &c., can be performed without coming in contact with a single bee. The ventilation is complete and under the perfect control of the operator at all seasons.

LE ROY GATES,  
Elkhart, Ind.

This is to certify that I have one of Gray's Bee Hives in use. The bees build their combs straight in the frames every time. The Hive is all that is claimed for it. I consider it the best hive I ever saw. I could not part with the one I have for any price if I could not get another. I have it in my house and the bees are no annoyance whatever. I think bees will make much more money in it than in any other hive I ever saw.

I take pleasure in recommending it to the public.

T. SMITH,  
Onarga, Iroquois Co., Ill.

ONARGA, ILL., July 7, 1865.

This is to certify that I have in use one of Gray's Bee Hives, and that it has so far filled the bill in respect to all the claims. I consider it the best hive in use.

GEORGE STANNY.